

9. (Amended.) The method of claim 1, wherein the mismatch repair protein(s) is (are) thermostable.

10. (Amended.) The method of claim 1, wherein the thermostable mismatch repair protein(s) comprises a MutS homologue, preferably MutS YT1 of *Thermus aquaticus*.

11. (Amended.) The method of claim 1, wherein the thermostable mismatch repair protein(s) comprises a MutL homologue, a MSH2 homologue, a MSH6 homologue, a MutM homologue, a MutY homologue, a MutT homologue, a MutH homologue, a HexA homologue, a HexB homologue, or a GTBP/p160 homolog.

12. (Amended.) The method of claim 1, wherein the denaturing is achieved by increasing the temperature of the solution, preferably to at least 90°C.

14. (Amended.) The method of claim 1, wherein steps b) through d) are repeated for between 1 and 10 cycles; wherein the new duplexes of step d) serve as new template polynucleotides in step b) in each subsequent cycle.

15. (Amended.) The method of claim 1, wherein steps b) through d) are repeated for at least 10 cycles; wherein the new duplexes of step d) serve as new template polynucleotides in step b) in each subsequent cycle.

16. (Amended.) The method of claim 1, wherein additional steps are performed, said additional steps comprising:

- f) generating a gene library by cloning the plurality of recombined polynucleotides;
- g) expressing and screening the gene library for an activity or property of interest; and
- h) isolating or identifying the recombined polynucleotide which gives rise to the activity or property of interest.

17. (Amended.) A plurality of recombined polynucleotides generated by a method as defined in claim 1.

18. (Amended.)

A recombined polynucleotide generated by a method as defined in claim

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